Project Title: Multi-Site Inventory Management System

Project Description:

Design and implement a simple Multi-Site Inventory Management System using SQL Server. The system should allow for the management of inventory across multiple locations, demonstrating basic distributed database concepts.

Key Features:

1. **Database Schema:**

   - Design a database schema that includes tables for products, inventory, and locations.

   - Consider relationships between tables to represent the inventory at different sites.

2. **Data Distribution:**

   - Simulate data distribution across multiple sites by having separate databases or schema for each location.

   - Explore SQL Server's Linked Servers or Distributed Queries to access and manipulate data across different sites.

3. **Inventory Tracking:**

   - Implement functionality to add, update, and view inventory for different products at each location.

   - Ensure that changes in inventory at one site are reflected at other sites.

4. **Transaction Management:**

   - Implement simple transactions to handle updates to inventory at multiple locations.

   - Demonstrate how SQL Server handles distributed transactions or explore strategies to maintain consistency.

5. **Reporting:**

   - Develop basic reporting functionality to view the overall inventory and stock levels across all locations.

   - Use SQL Server Reporting Services (SSRS) or similar tools to generate reports.

6. **User Interface:**

   - Create a user interface (can be a simple web application or desktop application) to interact with the inventory system.

   - Allow users to perform CRUD operations on inventory items.

7. **Replication:**

- A mixed of Full replication and partial replication together (depending on the data you are dealing with in the application).

Potential Technologies:

- Use SQL Server as the primary database management system.

- You are free to use any framework you desire in the application.

Evaluation:

- Ensure that data modifications are consistent across distributed databases.

- Demonstrate how the system handles basic distributed transactions.

- Test the system's usability and reliability.

- Must be in teams and teams must be from 7 to 10 members.